

EDUCATION TRAINING

- 2013 – 2015: **PhD** in Computer Science (University of Deusto). Title of the dissertation: **“Learning for Dynamic and Personalised Knowledge-Based Activity Models”**. Grade: **Sobresaliente Cum Laude**.
6 week research stay at **De Montfort University**, Leicester, United Kingdom.
- 2008 – 2010: Completion of the **PhD program lectures** in Computer Science (MS) at the University of Basque Country.
- 2001 – 2006: **BsC in Computer Science** at the University of Basque Country.
- 2005 - 2006: **Final Degree Project** at the Max Planck Institut für Quantenoptik, in Garching (Germany), in the Theory Group of Prof. Dr. Ignacio Cirac: “Voting protocols in the quantum scenario”. Past with honors.
- 1998 – 2000: **High-school** studies in Science at the Urola Ikastola, located at Azpeitia, Gipuzkoa, Spain
Final mark: 9.4/10

COURSES

- 2017: **International Summit and Summer School on Deep Learning** in Bilbao, Spain. Lectures about deep learning and its applications.
- 2011: **IFR Research Lectures** in Fraunhofer IPA, Stuttgart, Germany. Lectures about advanced industrial robotics.
- 2010: **CoTeSys-ROS Fall School on Cognition-enabled Mobile Manipulation**, Munich, Germany. Lectures about ROS, a robot programming framework, and about advanced perception technologies, cognition and planning for mobile manipulator robots.
- 2007: **Player Summer School on Cognitive Robotics**, Munich, Germany. Lectures about Player, a robot programming framework, and cognitive technologies for robotics.

WORK EXPERIENCE

- 2018 - ...: **Lecturer and Researcher** in the Computer Science Faculty of **University of Basque Country (EHU/UPV)**.
Teaching: lectures of Calculus (BsC), Statistical Methods in Engineering (BsC), Data Mining (BsC), Computer Vision (MsC), Deep Learning for NLP (MsC).
Research (IXA group): artificial intelligence, deep learning, multimodal representations and human activity recognition.
- 2015 – 2018: **Lecturer and Researcher** in the Engineering Faculty of **University of Deusto**.
Teaching: lectures of Programming III (Java), Programming IV (C/C++), Software Requirements and Software Design.
Research: artificial intelligence, deep learning and human activity recognition.
Main projects:
City4Age (EU H2020): development of human activity and behaviour recognition algorithms for smart cities.
- 2013 - 2015: **PhD student at Univeristy of Deusto**. Main research areas: reasoning and learning in human-centered environments.
Teaching: lectures in Software Design (BsC) in the Business and Computer Science Double Degree (2014-2015).
Main Projects:

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| | SONOPA (EU FP7): research on hybrid human activity recognition systems to develop dynamic and personalised activity models with prior domain knowledge. |
| | FRASEWARE (Spanish Government): knowledge discovery about human dementia based on gait analysis and physiological parameters. |
| 2006 - 2013: | Researcher at Tecnalia . Robotics Area. Main research fields: mobile robotics, artificial intelligence and artificial vision. Main projects: IWARD (EU FP6): development of the autonomous navigation system and the communication middleware of a team of robots LIMACCIO (Client: Acciona): development of a navigation system based on the teach&play paradigm for an industrial cleaning robot ACROSS (Avanza Program): development of a self-configuration system for social robots AUTORECON (EU FP7): development of a vision based navigation system for an industrial mobile manipulator |
| 2017 - ...: | Column writer in Berria (newspaper) . I write a monthly column about artificial intelligence and science in general. |
| 2015 - ...: | Radio collaborator (programs: Amarauna, Norteko Ferrokarrila and La Mecánica del Caracol) and TV collaborator (program: Azpimarra), talking about new technologies, robotics and artificial intelligence. |
| 2010 - ...: | Science blogger in blogs like Cuentos Cuánticos and Zientzia Kaiera. I write mainly about robotics and artificial intelligence. |
| 2004: | Collaborations with the local magazine Uztarria . |
| 2004: | Translation into Basque of the book named “R for beginners” published by UEU (Basque University of Summer). |
| 2001 – 2002: | English teacher at Centerpoint Academy . |

LANGUAGES

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| English: | CAE (Certificate in Advanced English) , Cambridge University (2000). 2001: Certificate of Completion in the HSQ Semi-Intensive English Program (advanced level) at The English Language Center, Cambridge, Massachusetts. |
| German: | Basic reading, writing and verbal skills. |
| Basque: | Native language . EGA (Eusko Gaitasun Agiria) Certificate. |
| Spanish: | Native language . |

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| PUBLICATIONS |
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JCR JOURNALS (12):

“Smart cities survey: Technologies, application domains and challenges for the cities of the future”, Ruben Sánchez-Corcuera, Adrián Nuñez-Marcos, Jesus Sesma-Solance, Aritz Bilbao-Jayo, Rubén Mulero, Unai Zulaika, Gorka Azkune, Aitor Almeida. (2019) in International Journal of Distributed Sensor Networks. Vol. 5, issue 6. JCR IF: 1.614, Q3 (Computer Science). ISSN: 1550-1477. DOI: <https://doi.org/10.1177%2F1550147719853984>

“A scalable hybrid activity recognition approach for intelligent environments”, Gorka Azkune, Aitor Almeida. (2018) In IEEE Access. Vol. 6, pp 41745 - 41759. JCR IF: 3.557, Q1 (Computer Science). ISSN: 2169-3536. DOI: 10.1109/ACCESS.2018.2861004

“Predicting Human Behaviour with Recurrent Neural Networks”, Aitor Almeida, Gorka Azkune. (2018) In Applied Sciences. Vol 8, issue 2, p 305. JCR IF: 1.679, Q3 (Physics, Applied). DOI: <https://doi.org/10.3390/app8020305>

“Neural Modeling of Fuzzy Controllers for Maximum Power Point Tracking in Photovoltaic Energy Systems”, Jose Manuel Lopez-Guede, Josean Ramos-Hernanz, Necmi Altın, Saban Ozdemir, Erol Kurt, Gorka Azkune. (2018) In Journal of Electronic Materials. Pp 1-14. JCR IF: 1.579, Q3 (Engineering, Electrical & Electronic). DOI: <https://doi.org/10.1007/s11664-018-6407-2>

“An IoT-Aware Approach for Elderly-Friendly Cities”, Rubén Mulero, Aitor Almeida, Gorka Azkune, Patricia Abril-Jiménez, Maria Teresa Arredondo Waldmeyer, Miguel Páramo Castrillo, Luigi Patrono, Piercosimo Rametta, Ilaria Sergi. (2018) In IEEE Access. Vol 6, pp 7941-7957. JCR IF: 3.244, Q1 (CS). DOI: <https://doi.org/10.1109/ACCESS.2018.2800161>

"Vision-Based Fall Detection with Convolutional Neural Networks", Adrian Núñez-Marcos, Gorka Azkune, Ignacio Arganda-Carreras. (2017) In Wireless Communications & Mobile Computing. Vol 2017, p. 25. ISSN: 1530-8669. IF: 1.899 (2016), Q2 (CS). DOI: <https://doi.org/10.1155/2017/9474806>

“MASSHA: an agent-based approach for human activity simulation in intelligent environments”, Oihane Kamara-Esteban, Gorka Azkune, Ander Pijoan, Cruz Enrique Borges, Ainhoa Alonso-Vicario, Diego López-de-Ipiña. Pervasive and Mobile Computing. Pergamon-Elsevier LTD. JCR Impact Factor (2016): 2.349, Q2. July 2017.

“Extending Knowledge-Driven Activity Models through Data-Driven Learning Techniques”, Gorka Azkune, Aitor Almeida, Diego López-de-Ipiña, Liming Chen. Expert Systems with Applications, vol. 42, no. 6, pp. 3115-3128. Pergamon-Elsevier Science LTD. JCR Impact Factor (2015): 2.981, Q1. April 2015.

“Dual Model Oriented Modeling of Monocrystalline PV Modules Bases on Artificial Neuronal Networks”. Lopez-Guede JM, Ramos-Hernanz JA, Zulueta E, Fernandez-Gamiz U, Azkune G. International Journal of Hydrogen Energy. Pergamon-Elsevier Science LTD. JCR Impact factor (2015): 3.205, Q2 (to be published).

“Combining Users' Activity Survey and Simulators to Evaluate Human Activity Recognition Systems”, Gorka Azkune, Aitor Almeida, Diego López-de-Ipiña, Liming Chen. MDPI Sensors, vol. 14, no. 4, pp. 8192-8213. JCR Impact Factor (2015): 2.033, Q1. April 2015.

“Latest Trends in Human Activity Modelling”, Gorka Azkune, Aitor Almeida, Diego López-de-Ipiña, Liming Chen. Dyna, vol. 90, no. 4. JCR Impact Factor (2015): 0.302, Q4. July 2015.

“Semantic framework for social robot self-configuration” Gorka Azkune, Pablo Orduña, Xabier Laiseca, Eduardo Castillejo, Diego López-de-Ipiña, Miguel Loitxate, Jon Azpiazu. MDPI Sensors, 13, 7004-7020. JCR Impact Factor (2013): 2.048, Q1. May 2013.

BOOKS AND CHAPTERS (1):

“Reasoning Systems for AAL”. Gorka Azkune, David Ausín, Diego López-de-Ipiña. Chapter of the book *Active and Assisted Living – Technologies and Applications*. ISBN: 978-1-84919-987-2. The Institution of Engineering and Technology (IET). United Kingdom, 2016.

CONFERENCES (10):

“Embedding-level attention and multi-scale convolutional neural networks for behaviour modelling”, Aitor Almeida, Gorka Azkune, Aritz Bilbao. (2018) in IEEE SmartWorld, Ubiquitous Intelligence & Computing (pp. 439-445). IEEE. Guangzhou, China. October 8-12. 2018.

“Preliminary Modeling of FLC dealing with MPPT problem”, Jose Manuel Lopez-Guede, Josean Ramos-Hernanz, Necmi Altin, Saban Ozdemir, Erol Kurt, Gorka Azkune. (2017) In European Conference on Renewable Energies (ECRES).

"Activity Recognition Approaches for Smart Cities: The City4Age use case", Aitor Almeida, Gorka Azkune. (2017) In Research and Technologies for Society and Industry (RTSI), 2017 IEEE 3rd International Forum on (pp. 1-5). IEEE. Modena, Italy. September 11-13 2017.

"Inter-activity Behaviour Modelling Using Long Short-Term Memory Networks", Aitor Almeida, Gorka Azkune. (2017) In International Conference on Ubiquitous Computing and Ambient Intelligence (pp. 394-399). Springer, Cham. DOI: 10.1007/978-3-319-67585-5_41. Philadelphia, USA. November 7-10 2017.

"An AAL system based on IoT Technologies and Linked Open Data for elderly monitoring in Smart Cities", Mulero R, Almeida A, Azkune G, Mainetti L, Mighali V, Patrono L, Rametta P, Sergi I. In 2nd International Multidisciplinary Conference on Computer and Energy Science, July 12-14, 2017, Split, Croatia.

“A Hybrid Evaluation Methodology for Human Activity Recognition Systems”, Gorka Azkune, Aitor Almeida, Diego López-de-Ipiña, Liming Chen. In Proceedings of 8th International Conference on Ubiquitous Computing & Ambient Intelligence, UCAmI 2014, December 2-4, 2014, Belfast, United Kingdom, pp. 92-99.

“A Knowledge-Driven Tool for Automatic Activity Dataset Annotation”, Gorka Azkune, Aitor Almeida, Diego López-de-Ipiña, Liming Chen. In Proceedings of the 7th International Conference Intelligent Systems IEEE IS'14, September 24-26, 2014, Warsaw, Poland, Volume 1: Mathematical Foundations, Theory, Analyses. pp. 593-604.

“Autonomous, Exchangeable and Mobile Production Units in Industrial Assembly Production Lines”, Jon Azpiazu, Gorka Azkune, Sotiris Makris, A Eytan, O Tockalar. IEEE

International Conference on Robotics and Automation (ICRA), 1st Workshop on Industrial Mobile Assistance Robots (IMAR2013) , 6-10 May, Karlsruhe, 2013.

“Semantic based self-configuration approach for social robots in health care environments”, Gorka Azkune, Pablo Orduña, Xabier Laiseca, Diego Lopez-de-Ipiña, Miguel Loitxate. In Proceedings of 4th International Workconference on Ambient Assisted Living, IWAAL 2012, Vitoria-Gasteiz, Spain, December 3-5, 2012. pp. 354-361.

“A navigation system for a high-speed professional cleaning robot”, Gorka Azkune, Mikel Astiz, Urko Esnaola, Unai Antero, José Vicente Sogorb, Antonio Alonso. In Proceedings of 12th Annual Conference TAROS 2011, Sheffield, United Kingdom, August 31 – September 2, 2011. pp. 24-35.

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| AWARDS |
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| 2017: | Best science popularization article award in “CAF-Elhuyar zientzia eta teknologia dibulgazio sariak” (“Science and Technology dissemination prizes CAF-Elhuyar”). Published in Elhuyar magazine. |
| 2015: | Best science popularization article award in “CAF-Elhuyar zientzia eta teknologia dibulgazio sariak” (“Science and Technology dissemination prizes CAF-Elhuyar”). Published in Elhuyar magazine. |
| 2014: | Best science popularization article award in “CAF-Elhuyar zientzia eta teknologia dibulgazio sariak” (“Science and Technology dissemination prizes CAF-Elhuyar”). Published in Elhuyar magazine. |
| 2004: | Special prize in “CAF-Elhuyar zientzia eta teknologia dibulgazio sariak” (“Science and Technology dissemination prizes CAF-Elhuyar”). Published in Elhuyar magazine. |
| 2003: | Special prize in “CAF-Elhuyar zientzia eta teknologia dibulgazio sariak” (“Science and Technology dissemination prizes CAF-Elhuyar”). Published in Elhuyar magazine. |
| 2002: | Second prize in “CAF-Elhuyar zientzia eta teknologia dibulgazio sariak” (“Science and Technology dissemination prizes CAF-Elhuyar”). Published in Elhuyar magazine. |
| 2000: | Extraordinary Award of High-School by the Basque Government. |